DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002797
Date Inspected: 28-May-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works, Ltd.

OSM Arrival Time: 2230
OSM Departure Time: 830
Location: Muroran, Japan

CWI Name: Makhmud Ashadi

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking and Deviation Saddles

Summary of Items Observed:

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes was present during the welding of the Saddle Casting. The following was observed:

The QA inspector arrived at the Fabrication Shop # 4 at the start of the shift to observe the scheduled C- Shift shop fabrication of the structural steel rib plate components for the West Deviation Saddle identified as W2E1. The QA inspector observed five (5) Japan Steel Works, Ltd. (JSW) shop personnel and one (1) Intertek Testing Service (ITS) personnel at the shop designated work area and were identified as follows; two (2) welders, two (2) helpers, one (1) Welding Engineer and one (1) Quality Control (QC) Inspector. The JSW welding personnel, Masao-Yamashita ID 73-4195 was observed performing the block tacking on the structural steel rib plate 1-4 and the double-bevel weld joint appeared to be identified as weld numbers E1Y-4L-1 and E1Y-4L-2. The second JSW welding personnel, Makoto-Kato ID 08-5018 was observed performing the block tacking on the structural steel rib plate 1-17 and the weld joint appeared to be identified as weld numbers E1Y-17L-1 and E1Y-17L-2. The welders were assisted by two helpers who performed the preheat operations and the grinding at the cascaded ends of the tack welds. The welders utilized the Welding Procedure Specification (WPS) SJ-3011-11 which was also used by the QC inspector, Makhmud Ashadi and the Welding Engineer, R. Kuraoka as a reference during QC and weld production verification.

The QA inspector, at random intervals, observed the QC inspector perform the verification of the minimum preheats temperatures and the Alternating Current (AC) welding parameters. The QC inspector also observed the Welding Engineer perform the various weld production verifications.

Later in the shift the QA inspector observed that the tack welding was completed on the structural steel plate 1-17 and the welder Masao-Yamashita was performing the tack welding on the structural steel plate 1-15. The QA

inspector also observed the that welder Makoto-Kato had completed the tack welding of the plates 1-8, 1-10 and appeared to be in the process of performing the tack welding of the rib plate 1-6.
The welding parameters were verified utilizing a Hioki 3109 Clamp Meter, Model RMS during the QC verification activities. The QA inspector observed the calibration dates of the clamp meter which appeared to be as follows; calibration performed on 05/22/08 and calibration due date 08/21/08.

QA Observation Summary

This QA inspector randomly observed the in process Shielded Metal Arc Welding (SMAW) for the tack welding of the structural Steel components for the West Deviation Saddles identified as W2E1. This QA inspector noted that it appeared the approved and latest revised WPS's were posted at the appropriate welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified by this QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for the preheat temperatures. The filler metal utilized by the JSW welding personnel was also verified. The QC inspector, Makhmud Ashadi appeared to perform the visual weld examinations, monitoring of the welding and the verification of the welding parameters as per the contract documents. The tack welding and inspection was not completed during this shift and appeared to be in general compliance with the contract documents.

See Weld Joints in Progress Inspected, below, in regards to QA observation of the welding parameters recorded during this shift on this date.

The following digital photographs illustrate the observations of the activities performed on this date.

Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	W2E1, E1Y-4L-2	SJ-3011-11	Makhmud Ashadi	250 AC	24 AC	140 mm/m	185 degrees C.	Masao-Yamashita
2	W2E1, E1Y-17L-1	SJ-3011-11	Makhmud Ashadi	250 AC	24.1 AC	145 mm/m	190 degrees C.	Makoto-Kato

WELDING INSPECTION REPORT

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Summary of Conversations:

There were no conversations relative to this project on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer